

1. Problem: Check if a number is even or odd.

Sample Test Cases:

Input: 7

Output: Odd

2. Problem: Calculate the factorial of a number.

Sample Test Cases:

Input: 5

Output: 120

3. Problem: Find the largest among three numbers.

Sample Test Cases:

Input: 10, 25, 15

Output: 25

4. Problem: Print the first N natural numbers in reverse order. Sample Test Cases:

Input: N = 5

Output: 5 4 3 2 1

5. Problem: Check if a number is prime or not.

Sample Test Cases:

Input: 13

Output: Prime

6. Problem: Calculate the sum of all even numbers between 1 and N. Sample Test Cases:

Input: N = 10

Output: 30 (2 + 4 + 6 + 8 + 10)

7. Problem: Print a right-angled triangle of asterisks.

Sample Test Cases:

Input: N = 4

Output:

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8. Problem: Check if a character is a vowel or consonant. Sample Test Cases:

Input: 'a'

Output: Vowel

9. Problem: Calculate the sum of digits of a number. Sample Test Cases:

Input: 123

Output: 6 (1 + 2 + 3)

10. Problem: Print the Fibonacci series up to N terms. Sample Test Cases:

Input: N = 7

Output: 0 1 1 2 3 5 8

11. Problem: Calculate the power of a number (a^b). Sample Test Cases:

Input: $a = 2, b = 3$

Output: 8 (2^3)

12. Problem: Find the sum of all multiples of 3 and 5 below N. Sample Test Cases:

Input: $N = 10$

Output: 23 ($3 + 5 + 6 + 9$)

13. Problem: Reverse a given number.

Sample Test Cases:

Input: 12345

Output: 54321

14. Problem: Check if a year is a leap year or not. Sample Test Cases:

Input: 2024

Output: Leap Year

15. Problem: Calculate the average of N numbers.

Sample Test Cases:

Input: $N = 5$, Numbers = 10 20 30 40 50

Output: 30

16. Problem: Print the multiplication table of a number up to N terms. Sample Test Cases:

Input: $N = 5$, Number = 7

Output:

$7 \times 1 = 7$

$7 \times 2 = 14$

$7 \times 3 = 21$

$7 \times 4 = 28$

$7 \times 5 = 35$

17. Problem: Write a C program to find the average of all odd numbers from 1 to n. Sample Test Cases:

Input: 10

Output: 5.00

18. Problem: Find the GCD (Greatest Common Divisor) of two numbers. Sample Test Cases:

Input: 18, 24

Output: 6

19. Problem: Calculate the factorial of a number using a loop. Sample Test Cases:

Input: 4

Output: 24

20. Problem: Print the ASCII value of all lowercase alphabets. Sample Test Cases:

Output:

a - 97

b - 98

...

z - 122

21. Problem: Count the number of digits in a given number. Sample Test Cases:

Input: 12345

Output: 5

22. Problem: Check if a number is a palindrome.

Sample Test Cases:

Input: 121

Output: Palindrome

23. Problem: Calculate the sum of digits of a number using a loop. Sample Test Cases:

Input: 456

Output: 15

24. Problem: Generate a pattern using nested loops. Sample Test Cases:

Input: N = 4

Output:

1

12

123

1234

25. Problem: Find the sum of the series $1^2 + 2^2 + 3^2 + \dots + N^2$. Sample Test

Cases: Input: N = 4

Output: 30 ($1^2 + 2^2 + 3^2 + 4^2$)

26. Problem: Check if a number is an Armstrong number or not. Sample Test Cases:

Input: 153

Output: Armstrong Number

27. Problem: Calculate the factorial of a number using a recursive function. Sample Test Cases:

Input: 5

Output: 120

28. Problem: Calculate the sum of all prime numbers between 1 and N. Sample Test Cases:

Input: N = 20

Output: 77 ($2 + 3 + 5 + 7 + 11 + 13 + 17 + 19$)

29. Problem: Find the LCM (Least Common Multiple) of two numbers. Sample Test Cases:

Input: 6, 8

Output: 24

30. Problem: Print the pattern using nested loops. Sample Test Cases:

Input: N = 5

Output:

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